



Deposited via The University of York.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/120/>

Article:

Bloor, K., Freemantle, N., Khadjesari, Z. et al. (2003) Impact of NICE guidance on laparoscopic surgery for inguinal hernias: analysis of interrupted time series. *British medical journal*. p. 578. ISSN: 1756-1833

<https://doi.org/10.1136/bmj.326.7389.578>

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



Impact of NICE guidance on laparoscopic surgery for inguinal hernias: analysis of interrupted time series

Karen Bloor, Nick Freemantle, Zarnie Khadjesari and Alan Maynard

BMJ 2003;326;578-
doi:10.1136/bmj.326.7389.578

Updated information and services can be found at:
<http://bmj.com/cgi/content/full/326/7389/578>

These include:

References

5 online articles that cite this article can be accessed at:
<http://bmj.com/cgi/content/full/326/7389/578#otherarticles>

Rapid responses

8 rapid responses have been posted to this article, which you can access for free at:
<http://bmj.com/cgi/content/full/326/7389/578#responses>

You can respond to this article at:
<http://bmj.com/cgi/eletter-submit/326/7389/578>

Email alerting service

Receive free email alerts when new articles cite this article - sign up in the box at the top right corner of the article

Topic collections

Articles on similar topics can be found in the following collections

- [General Surgery](#) (90 articles)
 - [Other Statistics and Research Methods: descriptions](#) (464 articles)
-

Notes

To order reprints of this article go to:
<http://bmj.bmjournals.com/cgi/reprintform>

To subscribe to *BMJ* go to:
<http://www.bmjournals.com/subscriptions>

Impact of NICE guidance on laparoscopic surgery for inguinal hernias: analysis of interrupted time series

Karen Bloor, Nick Freemantle, Zarnie Khadjesari, Alan Maynard

Department of Health Sciences, University of York, York YO10 5DD

Karen Bloor
senior research fellow
Zarnie Khadjesari
student

Alan Maynard
professor of health economics

Department of Primary Care and General Practice, University of Birmingham, Birmingham B15 2TT

Nick Freemantle
professor of clinical epidemiology and biostatistics

Correspondence to: K Bloor
keb3@york.ac.uk

BMJ 2003;326:578

After the introduction of Bassini's procedure in the late 19th century, methods of repairing hernias changed little until the 1990s, when synthetic mesh and laparoscopic methods arrived.¹ In contrast to the open mesh technique, laparoscopic surgery remains uncommon. In January 2001, the National Institute for Clinical Excellence (NICE) issued guidance that stated, "For repair of primary inguinal hernia, open [mesh] should be the preferred surgical procedure."² We describe patterns of surgical repair of inguinal hernias and assess the impact of NICE's guidance.

Methods and results

We found 217 000 cases with a primary procedure code for primary surgery for an inguinal hernia from the hospital episode statistics database for England from April 1998 to December 2001. Of these, secondary procedure codes for minimal access surgery identified 8960 (4.1%) cases in which surgery was laparoscopic.

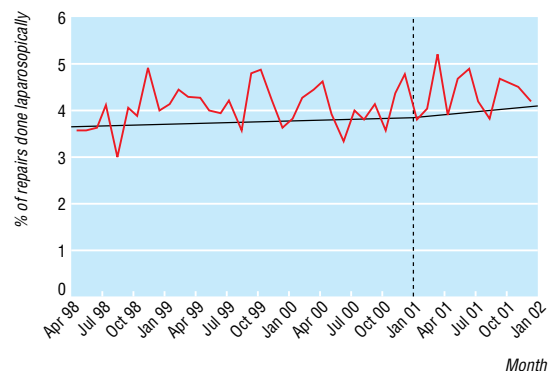
We used the software package SAS to do interrupted time series analysis on the rate of laparoscopic repairs as a proportion of all primary repairs of inguinal hernias, weekly, at 143 time points before publication of the NICE guidance and at 51 time points after. We also examined the effects of the NICE guidance on the overall rate of laparoscopic repair of hernias, assuming no change in case mix. A first order autoregressive model gave the best fit.

Publication of the NICE guidance did not reduce the proportion of repairs done laparoscopically. Before the NICE guidance, the rate of laparoscopic as a proportion of all repairs was increasing slowly and non-significantly by 0.08% (95% confidence interval -0.09% to 0.26%) per year. After issue of the guidance the rate increased slightly to 0.14% (0.02% to 0.25%) per year (figure).

The pattern was similar in the effects of NICE guidance on the overall use of laparoscopic repair of hernias. Before publication of the guidance, the annual increase in the number of laparoscopic repairs was 3.4 (-3.3 to 10.0) procedures, and afterwards the annual rate of increase rose slightly to 4.4 (0.0 to 8.6) procedures. Rates before and after did not differ significantly (P=0.6).

Comment

Guidance from NICE on laparoscopic repair of hernias had no impact on practice during the first year after publication. Despite the clarity of the advice given on laparoscopic hernia repair, on this occasion, NICE guidance did not achieve the desired change in clinical practice. Resistance to the guidance is illustrated by an appeal lodged to NICE and other articles³; however, it



Primary surgery for inguinal hernia repairs done laparoscopically as a percentage of all repairs done from April 1998 to November 2001, before and after the publication of NICE guidance in January 2001

is in areas of uncertainty and controversy that NICE should provide guidance.

Laparoscopic repair of hernias is a small part of NHS practice, but if our findings are applicable to other areas on which NICE has published guidance, NICE needs more active dissemination and implementation procedures. Guidance from NICE could be incorporated more directly into systems of clinical governance in the NHS.

Our analysis shows that routinely collected data can be used in clinical governance. Chief executives and medical directors of trust hospitals have access to hospital episode statistics and could use these data to monitor implementation of guidance as part of clinical governance. To improve evidence based practice in the NHS, guidance must be implemented more efficiently and clinical practice should be reviewed and monitored using well validated data.

KB and AM thank the late H Brendan Devlin (1932-98) for valuable discussions about health services research in general and hernia repair in particular. We all thank Anne Burton for administrative support.

Contributors: KB had the original idea for the study, contributed to data analysis, and, with ZK, drafted the paper. NF designed and, with KB and ZK, did the data analysis, KB, NF, ZK, and AM interpreted the data and revised the paper. KB is guarantor.

Funding: KB is funded by a Medical Research Council Special Training Fellowship in Health Services Research and by the Department of Health Policy R&D programme, which also partially supports AM.

Competing interests: None declared.

- Devlin HB, Kingsnorth A, O'Dwyer PJ, Bloor K. *Management of abdominal hernias*. London: Chapman and Hall Medical, 1998.
- National Institute for Clinical Excellence. *Guidance on the use of laparoscopic surgery for inguinal hernia*. London: NICE, 2001. (Technology appraisal guidance No 18.)
- Motson R. Why does NICE not recommend laparoscopic herniorrhaphy? *BMJ* 2002;324:1092-4.

(Accepted 20 November 2002)